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Spare the Wild Flowers.

A LADY, some time ago, wrote to an English paper complaining that an estate which she had permitted the public to use was being rapidly denuded of its luxuriant growth of ferns by "pirates," who stole them, roots and all, for sale. *Osmunda regalis* was the favorite with the thieves, and great hampers filled with it were seized at the railway station, addressed to a London florist. The *Athenæum*, in commenting upon this letter, states that thefts of a similar kind are frequent in various parts of England, and that many unenclosed districts have been entirely stripped of ferns and flowers, through greed of gain or mere wantonness.

There is so large an amount of uncultivated and unprotected land even in the most populous parts of this country that this pilfering from private homesteads is probably nowhere common. But it is quite time that earnest words should be spoken in defense of the wild flowers which grow in our woods and meadows. In another column of this issue Professor Beal speaks of the disappearance of two interesting plants from a region where they once abounded. Not long before his death Professor Reichenbach wrote to the editor of this journal deploring the wholesale way in which our native Orchids and other delicate herbaceous plants were exported to Europe, and expressing the apprehension that some of the most characteristic plants of the American flora might be entirely eradicated. In the Orchid Notes of this number some facts are given which show that choice and rare plants are in danger of extermination even when they grow in remote and almost inaccessible parts of the earth. Government protection has been given in some instances, and perhaps it will be needed in many others; one of our states, at least, has passed laws to protect certain rare Ferns. At all events it is time that public sentiment in our own country should be awakened to the real danger that some of our native plants may become extinct through greed or carelessness.

The wholesale way in which our flowers, and especially those of early spring, are gathered is a constant source of distress to those who really love them. One who now finds a flower not actually common, scrupulously hides its birthplace. But rare plants are not the only sufferers. Even so prolific a plant as the Mayflower is now no longer found in places where it once was common. The rage of the average flower-gatherer for quantities as large as he can carry, and his carelessness in gathering, have brought this about. And now that the practice of selling wild flowers in the streets is becoming general, we may look for a still more rapid rate and wider extent of destruction.

Too often it is just those persons who have some knowledge of plants and think they love them especially well who do the most damage in the woods. If a man does not know that the flower he sees is rare, he may leave it where it grows. But if he recognizes its rarity he is sure to pick it. If picking were all, however, the damage would not be very great. But picking often means tearing up plant by the roots; and too often, instead of merely gathering the flower, an attempt is made to transplant its roots. Nothing more exasperates the true plant-lover than this, except in those rare cases when the transplanter knows what he is about, has a suitable spot prepared for his specimen, and is certain to give it the treatment and attention it requires. Even then one may wish that he had left it in its home to propagate itself for the benefit of future plant-lovers. But how trying it is when some enthusiastic young lady or curious boy digs up the rare beauty, puts it in a garden-bed, and then wonders the next year why it does not "come up." The true lover of flowers loves them best when they are appropriately placed and surrounded; and in the case of wild flowers this must usually mean when they are in their own wild home. The desire to own the specimen is more often a proof of mere covetousness than of admiration.

To all who go into the woods and meadows after flowers and foliage this advice may be given: Gather only as many flowers as you really need to embellish your homes, or as you will give away, before they fade, to the poor or sick, which means, probably, not nearly as many as you have been in the habit of gathering. If you want large masses for any special purpose, as for the decoration of a church, take only those which grow in great abundance, like the Golden-rod in autumn, or the White Weed in spring. If an effective mass is your aim, a thousand Daisies will serve as well as would a thousand white Cypripediums, if you could find them! Whatever you take, take it gently and discreetly. Do not cut off the branch of a tree when a twig would do, nor wrench a branch in getting off a twig. Use scissors or a strong knife; not your hands. If you must cut a branch, cut it close to the trunk, that decay may not fasten upon the wound, and take the one which is the least essential to the beauty of the tree. If you want a spray of a young Pine tree, for its feathery green, or a bit of spring-time Red Maple, for its ruddy little leaves, or a branch of Liquidambar for its brilliant autumn coloring, do not pick off the leading shoot—a lateral one will be less missed. When you pick from a small plant use scissors, instead of starting its roots by a vigorous pull. If it is a shrub, do not take all its blossoms, but be content with a few, and complete your bunch from another individual. If it is an herbaceous plant leave some flowers for seed, and if it is a bulbous one, spare leaves enough to insure the bulb's ripening for another year. Never dig a root unless you are entirely certain you know how to make good use of it at home. And, unless the flowers are as common as Daisies or Golden-rod, do not pick them at all if you mean to throw them away the next minute. Gather flowers to bring beauty into your homes, but do not gather them for the mere sake of gathering, for that is lawlessness and waste.

Our freedom in this country hitherto from some of the difficulties which vex the nations of the Old World has resulted largely from our comparative sparseness of population and our great area of unappropriated land. As our population becomes dense we shall have problems of our

own. Under the conditions of our modern life some opportunity for summer rest, recreation and change of place is of great importance to our people. For the inhabitants of the interior of the country, a few weeks by the sea has a greater vitalizing and restorative effect than any other accessible experience. But the time is not far before us when no one who does not own land along the shore will have any right to camp near the ocean, or even to walk over the ground, on any part of the coast that is fit for comfortable occupancy. Parks and pic-nic-grounds along the shore will be fenced in and rented to those who are able to pay for them, and a fee will be charged for admission to places where the view of the sea is good, as people formerly had to pay for every glimpse of the Falls of Niagara. The best places will be taken first, then those not so good, until only the swamps and marshy shores will be left for outsiders, for the people who cannot become proprietors along the coast.

Men who are not yet old have spent summers in delightful solitude at places on the Atlantic coast where there are now streets of costly houses. These changes are inevitable, and they will go on with increasing rapidity. Some good places along the shore ought to be kept free to all orderly visitors forever, to the end that men may walk and meditate by the waves and have their souls uplifted by musing unforbidden where

"Still shouts the inspiring sea."

Such seaside parks might be owned by the state, or by the towns in which they are situated, or by churches or incorporated societies. The method of holding them is a matter of expediency or convenience, but land for this purpose should be secured at many points within the next few years. The matter is of grave and far-reaching importance. Our children are likely to see an almost continuous town along all the healthful and accessible portions of the Atlantic coast-line, with all the land so improved and occupied as to exclude all but the owners. The people of the whole country, through all the generations of coming time, should have some right in the encompassing ocean and along its shores.

The Art of Gardening—An Historical Sketch.

XI.—Rome.

"THE trees," says Pliny the elder, "formed the first temples" of the gods of the Romans. Useful gardens seem from the first to have been more beloved in Rome than in Greece. The kings, according to Pliny, cultivated them with their own hands; and early attempts at horticulture are implied in the familiar anecdote which represents Tarquinius Superbus symbolically decapitating the Poppies of his garden. Pliny mentions window-gardens as of comparatively early origin, although it is impossible to determine the exact period to which he refers. "In former times," he says, "the inhabitants of Rome, with their mimic gardens in their windows, day after day presented the reflex of the country to the eye, when as yet the multitude of atrocious burglaries, almost innumerable, had not compelled us to shut out all such sights with bars from the passers-by."

But it was only when intercourse with Greece, and through her with the customs of Persian luxury, became close and constant, that pleasure-gardening was pursued on any extensive scale. The first great Roman gardens of which we know were formed during the last century of the Republic, but even then many conscientious citizens thought pleasure-gardening a reprehensible form of luxury. Cato would have allowed only gardens of utility, and the rich Pomponius Atticus publicly protested that he had no more than "a little pleasure-wood" near his dwelling. It was during the first three centuries of the Christian era that Rome itself developed into a veritable city of gardens, and that its wealthier citizens luxuriated in vast country homes amid a wealth of architectural and natural or semi-natural beauty which the modern imagination can hardly picture.

In these sumptuous days important city homes had, of course, their court-yards decorated with trees and flowers, while the crowded state of the city brought roof-gardens (*solaria*) into general use, The roof was carefully prepared with successive layers of Larch-wood, Beech-boards, broken stones and mortar, and potsherds, and then finished with a pavement of stone, brick or even mosaic.* The plants were cultivated in large square boxes and in vases of stone or lead, or even set out in beds as though upon the solid earth.† Large trees were grown on these roofs, and a constant feature was the Vine-arbor or *pergola*, which is still familiar to the eyes of all travelers in Italy. Seneca makes bitter complaint of the extravagance shown in these *silvæ in tectis*.

The design of several small suburban gardens is preserved at Pompeii, and, although it was a Grecian city, similar arrangements prevailed in those of Roman origin. They were formal little spots, with walls and colonnades, altars and small temples, basins and sculptured figures. In one can be traced twelve large beds, evidently for the cultivation of flowers; but the inhospitable lava-soil usually prescribed the use of great boxes or long stone troughs. Climbing plants covered the walls, or else these were painted with garden scenes, fictitiously extending the narrow area. In the larger provincial towns an outer garden was often connected with the inner one, sometimes forming a vineyard or orchard, but sometimes a little wood or a diversified bit of natural-looking landscape, with grottoes and rills and multitudes of ornamental birds.‡

It is almost impossible, within brief limits, to give even a faint idea of the condition of Rome itself when its urban and suburban gardens were in their prime. Towards the end of the third century after Christ, says Lanciani,§ "there were in ancient Rome eight *campi*, or commons, green spaces set apart mostly for foot-races and gymnastic exercises, . . . and about thirty parks or gardens which, first laid out by wealthy citizens, . . . had been absorbed into the public domain by right of purchase, by bequest or by confiscation." To this list of open planted spaces, free to the people at all hours of the day or night, must be added the cemeteries, "those marble cities of the dead, shadowed by stately Cypresses and Weeping Willows;‖ the sacred enclosures of temples, with their colonnades and fountains, . . . and lastly the great *thermæ*," which, nominally baths, were really "gigantic clubs," furnished with every convenience for the enjoyment of in-door and out-door pleasures.

The largest of the "commons" was the Campus Martius, a vast level space—filled with buildings and play-grounds and water-works, and surrounded literally by miles of sumptuous colonnaded porticoes enclosing beautiful gardens—which lay beside the Tiber and extended from the foot of the Pincian Hill as far as the present Vatican Bridge in one direction, and to the Arch of Titus in another.¶ The parks and gardens proper were simply omnipresent. "The city," writes Lanciani, "was not only surrounded and enclosed by them but intersected in every direction. . . . Rome occupies the *thalweg* of the Tiber, a plain less than a mile wide and about three miles long, flanked east and west by parallel ranges of hills. . . . Both ranges were covered with gardens. Let us begin with the east range overlooking the Campus Martius. The Pincian Hill, the promenade of modern Rome, was occupied by the magnificent gardens of Acilius Glabrio. . . . Where the Villa Medici . . . now stands were the gardens of the Anician family. . . . The southwest slope of the same Pincian Hill . . . was occupied by the gardens of Lucullus. . . . The valley between the Pincian and the Quirinal, . . . a charming and undulating district with glens and overhanging rocks, rivulets of pure water and other natural attractions, was the seat of the gardens of Sallust, the finest and most celebrated of ancient Rome." Farther south lay a long line of private and imperial gardens, larger and smaller, "all forming one stretch of verdure more than two miles long and over half a mile broad." In earlier times these hillside districts had been covered with burial-grounds; but, as Professor Lanciani has recently discovered by excavation, these were gradually but systematically buried beneath enormous masses of pure earth, and turned from "pestilential dens into smiling gardens." Mæcenas began the work on the Esquiline Hill, prompted by a desire not more for the æsthetic than for the sanitary benefit that would result.*

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*Jaeger, *Gartenkunst und Gaerten Sonst und Jetzt.*

†Becker, *Gallus.*

‡Martial calls these suburban gardens *rus in urbe*, now a familiar phrase.

§*"Ancient Rome in the Light of Modern Discoveries."*

‖The Weeping Willow was first introduced into modern Europe from the Levant about the year 1720. It would be interesting to know whether our learned author has documentary evidence for the satement that it was a familiar tree in ancient Rome. The Chinese have known it, however, for many centuries, and that there was a certain amount of commerce between China and imperial Rome is proved by the fact that in the great collections of objects of art and curiosity displayed beneath some of the public porticoes, Professor Lanciani cites some of Chinese origin.

¶Jaeger.

*See Horace, *Sat.* i., 8, 14.

"The hills on the west side of the valley were also occupied by an uninterrupted chain of gardens" from Monte Mario to the southern ridge of the Janiculum. "The banks of the river also had been transformed into a garden by Augustus, Pompey the Great, Domitian, Nero, Caligula and others." And in and around the palace of the Cæsars on the Palatine Hill were gardens more sumptuous and varied than all others. Within the precincts of the Golden House of Nero were comprised "waterfalls supplied by an aqueduct fifty miles long; lakes and rivers shaded by dense masses of foliage, with harbors and docks for the imperial galleys; . . . porticoes three thousand feet long; farms and vineyards, pasture-grounds and woods teeming with the rarest and costliest kinds of game; zoölogical and botanical gardens," and an incredible wealth of works of architectural, plastic and pictorial art, among them banqueting-halls with ivory ceilings, "from which flowers and precious perfumes could fall gently on the reclining guests." After the murder of Nero, Vespasian and Titus gave back to the people the greater portion of the ground which he had usurped for his private satisfaction, and the Colosseum was built on the site of his enormous lake. In short, wherever one looked in imperial Rome "in every direction the architectural masses were broken and enframed in the green of gardens and parks,"* while water was used in canals, fountains, basins and cascades to an extent unknown before or since.

The design of the Roman pleasure-ground was, in general, strictly formal, and trees and shrubs were frequently cut into the most artificial shapes. But there were exceptions. The poets constantly protested against the reigning fashions, and perhaps it was owing to their words at this time (as it certainly was in the eighteenth century in northern Europe) that a partial reaction in favor of more natural kinds of beauty came about. Many portions of the great garden of Nero were naturally disposed, and more than one ancient writer comments upon his love for rural, picturesque landscape effects. In the gardens of Lucullus the designs of Oriental pleasure-grounds were imitated.

New York. *M. G. Van Rensselaer.*

*Friedlander: "*Darstellungen aus der Sittengeschichte Roms.*"

The Woods of Mount Desert Island.

MOUNT Desert Island has an area of about one hundred square miles, washed by the ocean on the south, by broad bays on the east and west, and almost joining the mainland in the extreme north. Its outline is very irregular, like that of the Maine coast in general, with harbors and indentations everywhere. By the largest of these, Somes Sound, a long, deep fiord of the sea, running far into the land between mountainous shores, the island is nearly bisected. There are thirteen or more mountains, mostly bare, rocky summits, varying in height from a few hundred to fifteen hundred feet, lying across the centre of the island, from east to west, like a great belt, with deep, blue lakes nestled between them. To the north, the north-west and south-west the surface is more flat, with lower, more undulating hills. On the south-east and east the mountains approach the shore very closely in a coast of precipitous cliffs and bold, rocky headlands that has made the island famous. Nowhere on the Atlantic coast of this country is there such a wonderful combination of natural scenery; nowhere a spot where mountain and shore are so blended. For years it has been renowned as the crowning glory of the beautiful, countless-harbored coast of Maine.

The destruction of the forests of the island has already done much to mar the beauty of this unique resort, and, certainly, the importance of preserving the woods which still remain, should be admitted by every lover of Nature. The character of the soil, the ruggedness of the surface, the stunting influence of the cold sea winds upon its southern shore, all make the question of economic forestry one of secondary importance. That trees must be spared not for the lumber they yield, but for the beauty they may add to the landscape, should be the argument to the mind of the land-owners of Mount Desert. Wild beauty means summer visitors as long as the island endures, and such summer residents have, within the last twenty years, made its fame and fortune.

Mount Desert is in no sense an agricultural region. The soil is thin, very little of the surface is level, and the lowlands are so wet that the cost of draining would be beyond the means of the owners. A few favored spots in the northern part of the island, where the climate is more genial, can be profitably devoted to the plow, but the inhabitants of the island could not live by farming alone, and have no excuse for regarding the woods as their natural enemy.

The forests of Mount Desert were once full of wealth, and would still be a source of wealth if the lumberman and the forest-fire had not done their work so well. The first permanent settlement on the island was founded on the lumber business, which drags out a slow existence there to-day. While at its best, the business was profitable; saw-mills sprang up over the island—even between 1865 and 1870 there were at least eight saw and shingle-mills in the three towns of Mount Desert, Eden and Tremont—the brooks ran full and turned the wheels, vessels were built, and the lumber found a ready market. High up on the mountains, through the mountain gorges, along the ponds, everywhere, the great trees growing on the thin but rich wood-soil were taken out, not one by one, but all together, and the forest-fire followed. One of these conflagrations, fed by the dried refuse left by the lumbermen, laid waste much of the central part of the island. To-day nearly every saw-mill is in ruins; the mountains are bare; acres upon acres are overgrown only with a poor wood-growth that years will bring to little or nothing; the soil has been burned off or washed away; the streams preserve no even flow. There is no longer much to fear from lumbering, but two saw-mills at Somesville are still doing infinite harm to the beautiful Great Pond Woods, and should be stopped without delay. If the town of Mount Desert values its attractions as a summer resort, it could well afford to purchase and destroy both these mills, and even support the owners at the public expense if they were unable to earn a living in any other manner.

This great reason for jealously preserving the remaining woods of Mount Desert Island is their infinite value as a part of the wild scenery of the place, and their wonderful attraction to the city-wearied man or woman in search of a summer home and resting-place. With the destruction of the the forest-beauty and the impairment of the scenery will come depreciation in land values and diminished attentions as a summer resort.

First of all it must be understood that here, as on the Maine coast generally, the soil is exceedingly thin along the shores and upon the rocky hills and mountains. If deprived of the protection of the woods this soil is soon washed into the ravines and valleys; if exposed to fire it is burned like fuel. The peaks of Mount Desert were not always barren and desolate, nor were the rocky islets all along the coast bare as they now are, with hardly a bush to cover them. Some of the mountain summits may have been always bare, but it is plain that, as a whole, the mountain masses were well wooded and protected. To-day the steep side of Beech Mountain still shows some of the oldest, most beautiful woods on the island, while upon the sides, almost upon the summits of other greater mountains, we find evidence of great trees gone to destruction years and years ago. What the island was in those early days of its full beauty must be far beyond the conjecture of the tourist of the present time. Some idea of these mountain woods may still be gained by visiting the western peak of Western Mountain, the most beautiful mountain of the island. On the other hand, the eastern peak of the same mountain shows, in vivid contrast, the desolation wrought by fire—a mere mound of white rocks, with here and there skeleton trees, a scene only softened by the covering of green that Nature kindly gives the wounds inflicted on her earth.

In a few localities organizations have been formed to protect the forests from fires, but these should be extended and made efficient, not only to check wood-fires, even the most insignificant, and at the very outset, but to prosecute to the full extent of the law all offenders, whether inhabitants or summer visitors, although, with two or three exceptions, nearly all the wood-fires on Mount Desert have been caused, not by the visitors, but by the gross carelessness of the inhabitants themselves.

The system of wood-chopping is most wasteful. Whoever wants fire-wood for home use at once goes into his wood lot, hacks right and left, leaving behind him a desolate tract covered with débris to dry beneath the hot sun until it is tinder, waiting for a spark to begin still greater destruction. If he owns land in some convenient spot by the roadside, so much the better for him, so much the worse for the scenery! The result, of course, is ruin to the very beauty he should do his best to guard. This is especially to be lamented because such destruction is entirely unnecessary. The forest could be made to supply the needed fuel without destroying its wildwood beauty, which must be spared if the island is to retain its charm. Vigorous public sentiment, and town interference where it is possible, should at once put a stop to such wanton destruction as that on Western Mountain, on the Bubbles, and on the southwestern slopes of Sargent's Mountain.

Not very many years ago there was no more beautiful spot on the island than Hunter's Brook Valley. Great woods sheltering the rare, shy wood-plants, and giving deep seclusion, filled the valley and extended up the mountain sides. To the south, the woods became less worthy of the name, but were still woods until the explorer suddenly emerged on the stony beach where the brook emptied into a cove between two mighty headlands, and the ocean lay before him. Northward the brook flowed down amid the wildness of the deep forest from the ravines of the Triad, Pemetic and Green Mountains, and the watershed of Bubble Pond. The spot was one of the gems of the island to every lover of nature. Its beauty, however, did not save it, but proved its ruin. A "practical" man saw dollars in the timber of the wild valley, hired a gang of French Canadian wood-choppers, built a road of a mile or two in length towards the headwaters of the brook, and established a logging camp. Utter ruin followed, the wild woodland became a desolation, and this priceless beauty was lost forever.

In some parts of the island there is a partial realization of at least the practical value of beauty. At North-east Harbor, especially, is there evidence of this. And yet, it will not answer to leave merely a narrow strip of woods along the roads, while the work of destruction is carried on behind them, to repel the very people who bring prosperity to the island.

The method of road-making, now practised, is most destructive of natural beauty and attractions. It is of great importance to the inhabitants to prevent this in every possible way. Many visitors to the island are unfortunate enough to see little further into it than along its roadsides, and these are too often masses of stones, and piles of withered brush. If these waysides cannot be adorned, their natural beauty might be spared. Shrubbery and trees could be left generally, and where cutting is needful, the brush could be removed instead of being left to shut off access to the woods, and to dry into tinder to catch the first stray spark and become a forest-fire. That such devastation is allowed to go without reproof, and that telegraph companies, when erecting poles and stretching wires, are permitted to mutilate trees as they choose, is proof that the authorities do not realize that the beauty of the island is its real value. Some resolute policy must be adopted for protecting the forest-scenery of Mount Desert, or it will be robbed of its peculiar charm and be converted into an inhospitable waste.

Boston. *E. L. Rand.*

Notes Upon Some North American Trees.—XIII.

290. Castanea vulgaris, var. Americana, A. DC.—There is a much older name for the Old World Chestnut than that of Lamark (1783) taken up by Alphonse DeCandolle, namely *C. sativa* of Miller (Gardeners' Dictionary, 8 ed., 1768), already adopted by Nyman and by K. Koch, so that our American Chestnut, considered only a variety of the Old World tree, must become *Castanea sativa* var. *Americana.*

292. Ostrya Virginica, Willd.—The oldest name for our Hop Hornbeam is that of Miller (Gardeners' Dictionary 8 ed., 1768), *Carpinus Virginiana* so that it may be more properly written *Ostrya Virginiana*, Koch, than *Ostrya Virginica*, Willd.

294. Betula alba, var. populifolia, Spach.—It seems desirable to consider our Gray Birch as distinct from its Old-World congener, and to restore to it Marshall's name, *Betula populifolia.* The two plants are distinct in geographical distribution; in the shape of the leaves; in bark, size, and habit. The bracts of the fruiting catkins of the American tree are nearly triangular and covered on both surfaces with pubescence; those of the European plant are contracted into a long, narrow base and are quite glabrous. There are differences, too, in the size of the fruit and in the size and shape of its wings, which will aid in distinguishing the two species.

302. Alnus rhombifolia, Nutt.—Dr. C. C. Parry (*Bull. Cal. Acad. Sci.*, ii., 7,351), shows that this common Alder of California extends through Arizona and New Mexico to northern Mexico, and that *Alnus oblongifolia* of Torrey, (No. 303 Census Cat.) is the same plant, which he distinguishes by the number of stamens which instead of four in each flower are only two, sometimes increased to three or more rarely reduced to one. A specimen collected by Greene at Silver City, New Mexico, shows that this character in the number of the stamens holds good in the eastern plant. Dr. Parry points out, too, in this paper that *Alnus rhombifolia* may be distinguished always from the northern *A. rubra*, Bong., by its early flowers which begin to appear in California in January, before the leaves of the previous season have all fallen, fertilization being completed by the 1st of February, "at least as far north as the lower Sacramento Valley, the smaller winter streams over which they lean, as well as the adjoining banks, being copiously strewn with the effete male tassels resembling torpid caterpillars."

304. Alnus serrulata, Aiton.—This, the common Alder of the southern States, is rather a shrub than a tree, although I have seen it sometimes growing to the height of twenty feet, but always with a number of stems from a common root. It may well be dropped from the Silva of North America.

305. Alnus incana, Willd.—The common northern brook-side Alder, although it grows sometimes quite tall, is a shrub and not a tree, and it should be dropped from the Silva.

306. Salix nigra, Marsh.—Under this species should be added var. *longipes*, Andersson in Ofr. af. Vet. Akad. Forh. (1858) 22—a rather common Florida tree (St. Mark's, Rugel; Jacksonville, A. H. Curtiss; Duval County, J. D. Smith; Miami River, Sargent), with paler leaves, shorter aments, and longer pedicelled capsules than are found on the ordinary northern form. It is the *Salix Humboldtiana* of Wright's *Plantæ Cubenses*, No. 2132.

315. Salix cordata, var. vestita, Andersson.—The so-called Diamond Willow of Nebraska and Dakota, may be dropped from the Silva. It is not probable that any form of *Salix cordata* ever becomes a tree; and the large specimens on the banks of the Missouri River in Dakota, with the peculiar diamond markings, if they exist at all, belong probably to *S. amygdaloides.*

329. Chamæcyparis sphæroidea, Spach.—The first name for this tree is *Cupressus thyoides*, L.; and this specific name should be retained, the name of the White Cedar becoming *Chamæcyparis thyoides.*

330. Chamæcyparis Nutkaensis, Spach.—The orthography of the specific name as written by Lambert (Gen. Pinus, ii., 18), with whom it originated, is *Nootkatensis.*

Juniperus flaccida, Schl.—Dr. Havard has discovered this north-Mexican Juniper on the Chisos Mountains in western Texas (*Proc. U. S. Nat. Mus.*, viii., 504), and it must be included therefore in the North American Silva. It is a shrub or small tree, with shreddy bark, spreading, slender branches, acute and somewhat spreading denticulate leaves, and large globose or tubercled fruit. This is a widely-distributed tree apparently, although nowhere very common. It should follow *Juniperus pachyphlæa* in the catalogue. *C. S. Sargent.*

New or Little Known Plants.

Dendrochilum filiforme.

THE remarkably well-grown specimen of this lovely Orchid, illustrated on page 485, received the first prize as the best single Orchid at an exhibition of the Massachusetts Horticultural Society in June last. It came from the fine collection of Mr. John L. Gardner, of Brookline, Massachussetts, where it was grown under the care of Mr. C. M. Atkinson, the able head-gardener of the estate. The plant had altogether forty-eight flower spikes, most of them being over a foot long.

A specimen of this size is rarely met with and presents a spectacle not soon forgotten. The individual flowers are small and of a rich yellow color, but they are so abundant and so closely set that they fully justify the name of "The Golden Chain," which has been given to the plant.

Dendrochilum filiforme was introduced from the Philippine Islands as far back as 1836, but it grows also in quantities on Mount Mulu, in Borneo, where I found it a few years

ago growing on trees together with *Cœlogyne Sanderiana*, at an altitude of 500 feet above the sea. It flowers in its native home in July and August, and enjoys a moist and warm atmosphere, and, therefore, the temperature of a Phalænopsis house will suit it best; but it can also be successfully grown in the warmer part of the Cattleya house if a more moderate supply of water is given. As the plant flowers on its young growths it should be grown on after flowering, until the young bulbs are fully formed, and then less water and lower temperature may be given to it.

It appears that the plant gets a short rest in its native home, as it begins to grow and flower there again as soon as the dry season of three or four weeks duration is over. *Dendrochilum filiforme* is difficult to import, owing to its thin and fleshy bulbs which easily dry or rot off, and this is undoubtedly the reason why it is to-day still comparatively scarce.

I. Forstermann.

Newtown, L. I.

Fig. 133.—A well-grown specimen of Dendrochilum filiforme.—See page 484.

Foreign Correspondence.

London Letter.

THE National Dahlia Society always holds a representative exhibition of its chosen flower at Sydenham, but this year every member seemed to exert himself to make the show outstrip in size and interest all its predecessors, and the result was a really grand exposition of the Dahlia in all its sections and varieties. Then, of course, a Dahlia centenary would not be complete without its conference and "papers," so we had a history of the flower since its advent on English soil up to the present from Shirley Hibbard, who must have taken a deal of pains to hunt up old references in order to compile the instructive chronicle. He related the early history of the plant from 1615, the date of its introduction to England by the then Marchioness of Bute, then through all its interesting phases of development in the hands of early florists, where and when it first produced double flowers, and how the various sections originated, such as the "Show," "Fancy," "Pompon" and "Cactus," and with all this historical detail were interwoven pleasant anecdotes and incidents. Besides this literary disquisition we had papers on the practical part of the question, such as the cultivation of Show Dahlias by Turner, of Slough, and of other sections by Cheal, both qualified lecturers.

But though we enjoyed a grand exhibition of the Dahlia, with a creditable literary accompaniment, little good will be derived from this centennial event. Nothing new was brought out in the essays, and no new varieties of the flower were shown. The exhibition, however, showed the rapid advances made of late years in the Cactus, decorative and single forms of the flower, and it plainly showed how rapidly florists are able to create a supply to meet the public demand for any particular class of plants. It seems but a short time ago when there were no single Dahlias except the old *D. coccinea* and its forms rarely seen outside of a botanic garden. Then appeared the beautiful, though tall and coarse growing, Paragon, which seemed to whet the appetite of flower lovers for more. Single varieties at once came in multitudes, until the same

public grew tired of new ones, so that to-day they are not so popular as five years ago. The Cactus Dahlias have almost a parallel history. The original *D. Juarezii* was and is still very beautiful, but, not content with this, the florists took advantage of the demand for the genuine flower to foist upon the public so-called white, yellow and pink Cactus Dahlias, which no more resemble the Juarez Dahlia in form than did the early double Dahlias resemble the exquisitely moulded varieties, the so-called Show and Fancy classes we now have, and which, by the way, seem to be more appreciated than they were a few years ago. What, to me, seems the greatest improvement in the Dahlia is the dwarf race that have appeared lately, and which, for ordinary decorative gardening, will be an immense gain. These plants are not only dwarf, but extremely floriferous, and, for massing on lawns, are invaluable. I saw, a few days ago, a mass of the Glare of the Garden, broadly margined with the pure white Pearl, which only rises eighteen inches high; and I have seldom seen a more effective touch of color on a lawn. A still later improvement is a dwarf strain of single Dahlias, which has just been brought into notice by Mr. Girdlestone, the Secretary of the Dahlia Society, who exhibited them at the centennial. Some of these, which are collectively known as *Dahlia pumila*, are under eighteen inches in height and are most floriferous, so that they are likely to prove good bedding plants. If we can fix a dwarf strain of single varieties it will do away with one of the chief objections to the older and taller sorts, which require a deal of staking and tying. Beyond these there was, among all the novelties submitted to the judges at this great show, no absolute departure in form or color. Among the Cactus section were the following certificated sorts: Mrs. Douglas, salmon-pink; Marchioness of Bute, pale yellow, suffused with mauve; and Centenary Year, scarlet. The tendency of the new single kinds is towards two or more colors in the flowers, the florets being sometimes tipped with a color different from the ground tint, and sometimes collected in concentric zones around the centre.

Though the Dahlia monopolizes the florist's attention for the moment, it will, on the first appearance of frost, give way to the Chrysanthemum, whose society has already begun its active work for another season, and at its first exhibition this week there was a fine display of early-flowering sorts, which, however, are few in number, though one grower managed to get together over forty distinct sorts in bloom. The leading varieties shown are, doubtless, all well known to American florists. They included Madame Desgranges, the white and golden forms; G. Wermig; Mrs. Burrell (last year's novelty), primrose-yellow; Sam Henshaw; Holy Innocents; Pynaert Van Geert; Précocité; Mrs. Cullingford and Mademoiselle Lassali, white. Among the certificated novelties was one under the name of Comtesse F. de Carial, described as a semi-incurved Japanese sort, of a buff-yellow color. The other certificated sort was Sam Henshaw, also a Japanese variety, with white flowers, and a genuine acquisition to the early-flowering race.

This week the periodical visit of the floral committee to the trial grounds in the Royal Horticultural Society's garden at Cheswick took place, when the merits of various classes of plants were discussed and adjudged. The subjects were Asters, Dahlias, African Marigolds, French Marigolds, Heliotropes, Scabious and Zonal Pelargoniums. Of these there are representative collections of sorts cultivated, including novelties sent by the leading seed-houses on the continent and at home. The Asters make the most brilliant display, and the season seems to have suited them well. After inspecting all the sections, the committee certificated the strains known as the Imbricated Pompon, Dwarf Pyramidal, Hedgehog, Victoria, Cocardeau or Crown, and the new Liliput, a strain of miniature Asters a few inches high, extremly floriferous, and of varied and bright colors. Among the strains to which awards of merit only were given, and which, therefore, were not so commendable as those certificated, were the Dwarf Chrysanthemum, Dwarf Victoria, Dwarf Bouquet and New Victoria.

The Heliotropes considered worthy of certificates were all raised by Lemoine, and were named Fleur d'Ete, with a very large truss of pale purple and of compact growth; Capus, large truss of very deep purple; Victor Durny, a tall and strong variety, with pale purple flowers in very large clusters. New certificated Pelargoniums, also, were mostly all from Lemoine, their names being Charbon, double orange-scarlet; Souvenir de Mirande, single flowers with white centres and cherry-colored edges, and two unnamed seedlings, different in color from older sorts. The dwarf strain of *Scabiosa atropurpurea* is now becoming very popular, especially for market, and Vilmorins strain, named Half-dwarf Blood Red, is one of the best I have seen, and was worthily certificated. Of the French Marigolds, the new sorts named Electric Light and Dobbies Selected were the best, and among the African Marigolds, certificates were voted to those named Lemon Queen, Prince of Orange and Dwarf Orange (which, by the way, is not very dwarf), and Dwarf Golden, very compact and pretty. Among the Dahlias approved were Professor Baldwin, a brilliant scarlet Cactus variety; Empress of India, the finest deep crimson Cactus sort, and North Light, a scarlet Pompon. Altogether, there is a most valuable series of trials being carried on at Chiswick this year, the importance of which is recognized by all who wish to make selections from classes of plants abounding in varieties. Being grown under precisely the same conditions, the relative merits of every sort may be seen at a glance. The full reports of the committee's observations are published in the Society's journal, issued periodically, so that the fellows of the Society derive the benefit of independent opinion of novelties.

London. *W. Goldring.*

Cultural Department.

September Notes on Interesting Shrubs.

THE custom of spending the months of July and August at the seaside, now so common among people both from the country and city, naturally involves the loss of appreciation and value for many garden plants which are most attractive at that time. To those living in the country, or who have a rural place in which to spend a month or two in the spring or autumn, it is of importance to have such hardy ornamental plants as are most effective or interesting at these periods. There is naturally no lack of interesting or beautiful flowering plants in May or June, but, when the summer is over, the brilliant colors of autumn foliage and fruit, the Sunflowers and native Asters and Golden-rods have largely to be depended upon to make up for the loss of the greater variety found earlier in the season. But brilliantly-colored foliage in September is dependent, very much, on various meteorological conditions, as the present wet season in eastern Massachusetts has shown in the continued greenness of the leaves of nearly all trees and shrubs. And much of the beauty of some Golden-rods and Asters is destroyed by long-continued rains.

Native woody plants in full flower at this season are rare, but a few have showy fruits, and some foreign species are notable for both flowers and fruit. The showy *Clematis Jackmani* and other kindred varieties are becoming well and widely known. The period of most profuse flowering is earlier in the season, but sometimes a good number of blossoms continue to appear during the early autumn. These flowers are extravagantly admired and praised by most people, but there are a few other, though less striking, species which are equally desirable. The fragrant *Clematis crispa*, with recurved light purple sepals, and *C. Pitcheri*, with its dark, dull purplish flowers, continue to bloom in the early part of the month and the latter species even until hard frost. The Virgins Bower (*C. Virginiana*) is often past its best flowering condition by the first of September, but the flowers are followed by the conspicuous feather-tailed fruit. This species bears staminate, pistillate or perfect flowers on the same or different plants, so that where the ornamental fruit is desired, as well as the flowers, care should be taken to select or propagate (by cuttings or layers) from fruit-bearing plants. *Clematis paniculata*, a closely-related Japanese species, and the Traveller's Joy (*C. vitalba*) of Europe, both flower at about the same time as the last and cannot be called September bloomers. One of the best species is *Clematis orientalis* (*C. graveolens* is a synonym often used) which bears its yellow flowers most abundantly during September, and which becomes covered with the beautiful silvery-white, long-tailed fruit while still in bloom.

Among all the introduced climbing flowering-shrubs few have proved more satisfactory than *Lonicera Japonica*, var. *Halliï*. It differs from the typical *L. Japonica* chiefly in being practically ever-blooming, and from June until after severe autumn frosts its fragrant white and yellow flowers are continuously produced. It is becoming well-known and commonly planted. The well-known and very fragrant Dutch Monthly Honeysuckle (*Lonicera Periclymenum*) also has a few flowers at this season, but they are very apt to be unpleasantly infested by Aphides. *Lonicera Sullivanti*, which has been generally grown as *L. flava*, is frequently met with in old gardens. When trained upon some support or trellis, and well-grown, it is very handsome in September with large clusters, from two to four inches long, of large, shining, bright red berries. *L. hirsuta* and the true *L. flava*, which is very rare, also bear an abundance of fruit, but on account of having a slight bloom it appears less brilliant in color.

Lycium Chinense, which is very closely related to the common Matrimony Vine, is a trailing shrub which if trained to some strong support will grow fifteen feet or more in height. The very long slender branches hang down laden with ovate or oblong, shining, scarlet fruit, which is from half an inch to an inch in length, and with green fruit and flowers in all stages of development.

Perhaps the most remarkably distinct and showy shrub at this season is *Symplocos paniculatus*, a native of Japan. The branches of last year's growth are covered with racemes of fruit of the brightest ultramarine blue color and the size of small peas. The leaves are dark green, thick and rough, and not liable to attack by insects. The numerous small, pure white flowers appear in the latter part of May and in early June. This shrub, which appears to be one of the very hardiest, is wide-spreading, and ordinarily grows to a height of six or seven feet at the Arboretum, although it may attain much larger proportions. It is as yet very rare in cultivation, but it deserves, and is likely to have, a place in all collections on account of its clean foliage as well as the graceful flowers and almost unique fruitage.

One does not naturally associate the autumn with the flowering catkins of Willows and Alders, but late August and September is the season in which the native Sea-side Alder (*Alnus maritima*) blossoms. The male catkins are very large, and the round, cone-like fruit matures in the autumn of the following year. The plant is usually shrubby, but in favorable situations it becomes a small tree twenty feet in height.

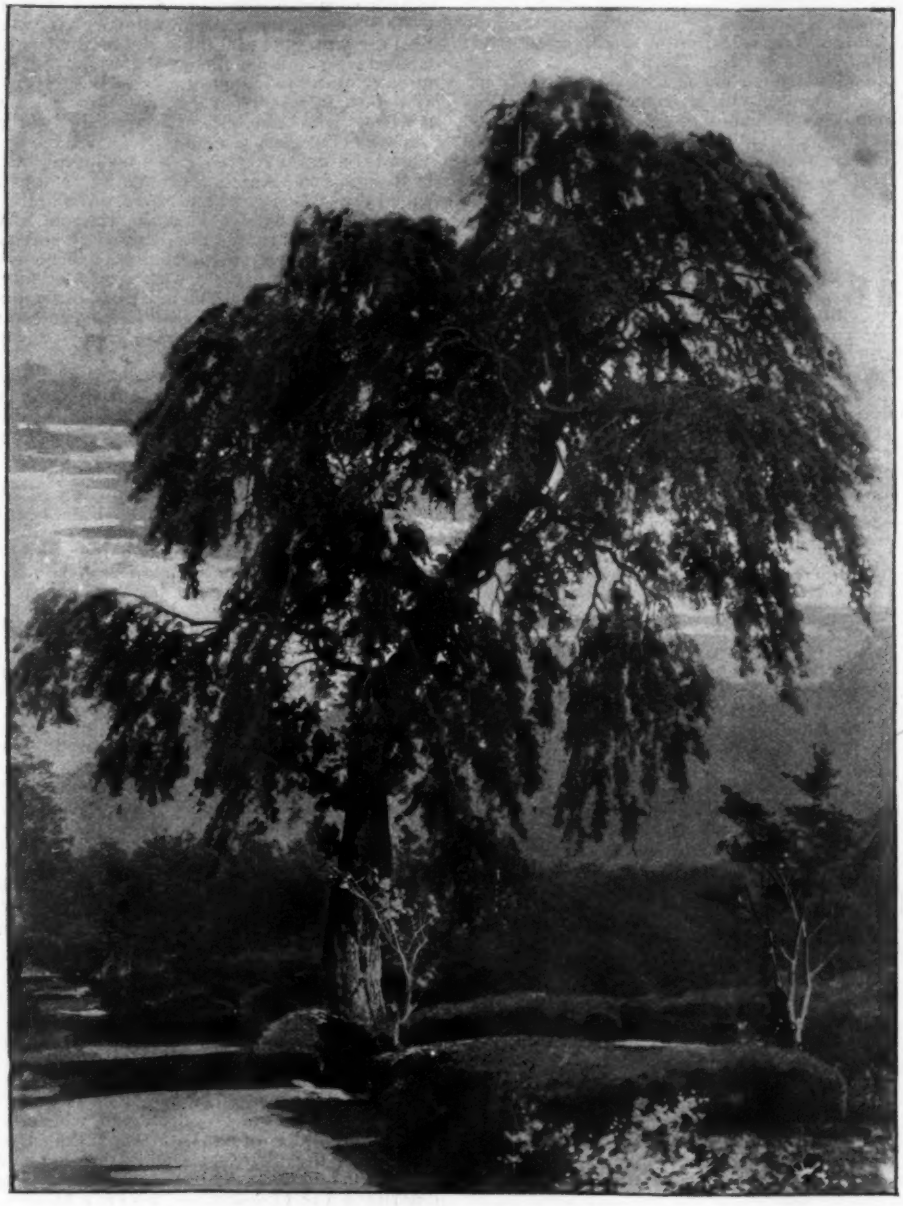

Fig. 134.—Prunus pendula.—See page 490.

The common Spindle-tree (*Euonymus Europæus*) presents considerable variation in foliage and fruit, and there are numerous named forms and varieties to be found in nurseries. Throughout September the pods are conspicuous by their red color, which varies in intensity on different plants. A Japanese variety, known as *E. Europæus*, var. *Hamiltonianus*, has a much more robust habit of growth than the European type, and the pods, which are of a beautiful pink color, also open earlier, in the latter part of the month, and disclose the seeds in the scarlet-colored arils. The well-known climbing

Bitter-sweet (*Celastrus scandens*) does not usually open its showy orange-colored pods and disclose the scarlet covering of the seeds until October. As in the case of *Clematis Virginiana*, where fruit is desired, care should be taken to select cuttings from good fruiting plants. On many of the plants all the flowers are sterile, and consequently produce no fruit.

The native Black Alder or Winterberry (*Ilex verticillata*) is a much-neglected shrub, in spite of its neat, compact habit of growth in cultivation, its delicate early summer flowers, and the abundant rich red fruit of September, which remains until winter, if not eaten by birds. A clear, light yellow-fruited variety is growing at the Arboretum. The less common *Ilex lævigata* ripens its fruit a little earlier in the month than the last species, and, although rather larger, it is similar in other respects, and is equally ornamental.

To the white and blue fruited species of Dogwood, which ripen in August, the present month adds the Flowering Dogwood (*Cornus florida*), with clusters of large, oval, bright red fruit, which make the plant almost as showy as when in flower. Unfortunately, birds, especially robins, are very fond of this fruit, and, in this region, it rarely remains long on the tree after it is ripe. It is one of the very few large shrubs or small trees which show red foliage so early in the season.

Of several species of Hawthorns which ripen fruit during the month there is none so handsome and conspicuous as *Cratægus pyracantha*, a native of south-eastern Europe, where it is evergreen. It is not very hardy here, and is usually much injured in winter, but in sheltered situations it becomes a dense, spreading shrub, which retains its leaves and fruit through the winter. The fruit, which is bright red, is as large as good-sized peas, and thickly set in small corymbs along the branches.

The crimson cone-like fruit of the Magnolias always attracts attention at this season, and, in this vicinity, grafted plants of *Magnolia glauca* showed the scarlet seeds early in the month, much earlier than any other species or than the same species when grown on its own roots.

Arnold Arbortum. *J. G. Jack.*

Observations on the Grape Crop.

IN former years the birds have stripped the vines of Early Dawn and some other varieties early in the season, while the Clinton has fallen a prey to them later; but this season they seemed to prefer the Clinton first of all, and long before it fairly began to ripen. From six Clinton vines which were loaded with fruit, every berry was taken two weeks ago. The same is true of Cornucopia, Early Dawn and several others with berries of that size which seems to be preferred. After these, the birds paid attention to Ives, Wilder, Worden, and large grapes of this class. Many of the grapes were only stabbed and left for the bees and wasps to finish. The whole berry was carried off in some cases, but this was not usual as it was with the smaller kinds. Preference was also manifested for the black grapes; the red ones were taken to a limited extent, but so far as I have seen not a white one was molested. Color seems to have been the first attraction, size next, while flavor was a matter of minor consideration. If not, why should sour, unripe Clintons be preferred to sweet Wordens and Wilders?

Many would be ready at once to charge the English sparrows with this destruction, but I have not seen one in my vineyard this season, and I conclude they are not indictable for this offence. The guilty ones are robins, thrushes, catbirds and "chippies." It has been remarked that robins are unusually numerous this season. They picked my black caps early in the season, and made clean work of it, and they did not refuse a meal of strawberries occasionally, and now it is the grapes. Can it be a scarcity of their usual autumn food, or does the increase in numbers account for their increased destructivenes? I have learned one lesson, at all events, which, is that safety in the future can only be insured by bagging every grape.

Bagging grapes has not afforded protection in other regards this year as it has formerly. While some clusters show the dried, mummified carcasses of berries destroyed by Black Rot, many more are of full size, the white ones hard as bullets, of a yellow, golden or leaden hue, with threads of fungus visible through the skin. The peduncle of such berries is invariably black and dead, and has a feeble hold on the berries. How does the fungus get to the clusters? First, it is possible that the spores may have been lurking on the young cluster when bagged; but the chances of this were much reduced in the case of clusters bagged before they bloomed, and these seem about as badly affected as any. My next theory is that the rains, which have been heavy, frequent and almost constant, have pounded holes through the bags, and through these holes have probably carried the spores which lodged in the cluster, and, under favorable conditions, germinated and grew. In many cases where the young clusters touched the side of the bags exposed to the rain, the bags were beaten so hard against them that grapes not larger than a half-grown pea were forced through and grew to maturity. In some instances these outside berries were the only diseased ones on the cluster, which speaks well for bag-protection. I regret very much that I had not tried a few of the water-proof bags to see if they would have afforded any better protection.

There are also some problems regarding the fructification of the blossoms not easily solved. We would naturally expect the strongest and most vigorous vines to set and mature a large crop, and yet the weakest and feeblest vines are frequently found to have not only the largest crop, but the largest and best developed clusters. Scores of what I consider my best vines have, this season, made a sorry show of ragged imperfect clusters, a result which I have never before seen. There is a cause for this freak, no doubt, but I have yet failed to discover it. Another peculiarity is the unevenness with which the grapes grow and ripen. While the larger portion of the cluster will be fully ripe, the remainder will be green or partly colored. By the time these late berries get ripe, if they ripen at all, the rest of the cluster will be rotten. This feature of uneven ripening was prevalent last season, but far more so this season. The few days' difference in the blooms of the cluster seem hardly sufficient to account for this phenomenon, and I have never heard any attempt to account for it otherwise.

The last and most serious calamity with which our grapes have had to contend has proved the most fatal one. To have them escape mildew, rot, anthracnose, and the whole tribe of insect enemies, and then burst open just as they are at the threshold of maturity is disappointing, to say the least. But nine consecutive rainy days were too much for many kinds, and the way they split was a sorrow to behold. I had a quantity of fine Wilders, which lacked but a few days of ripeness, but the great majority of them cracked and became food for the bees. Cottage, Worden, and many others, fell a prey to the same cause; while Jefferson and Salem are a total loss. Remarkable as the season has been, my Salems were larger and finer than I ever grew, but they have all decayed.

It has often been said that the great diminution of the grape crop throughout the country would enhance prices, so that a partial crop would net as much money, but the present tone of the market does not justify that prediction. Retail prices seem to rule about as usual. I hear of many vineyards being uprooted because the prospect for grape-growers is so gloomy.

In my case, copper sulphate has not given immunity from mildew. This fungus is abundant, although the foliage of my Vines generally is, I think, quite as perfect as usual at this season of the year. Some varieties, of course, are entirely denuded, showing them to be less susceptible to the influence of the sulphate than others, if the retention of the foliage is to be credited to its presence. Perhaps I made too few applications, or more probably the rains washed the sulphate from the Vines as soon as applied. Forty-one rainy days in three months and a half, with much dull and foggy weather between the showers, exactly suited the habits of the fungus and protected it from our remedies. In a season of less moisture, and earlier and more persistent applications, I doubt not the results would be more satisfactory.

The most perfect foliage in my vineyard is on a few Vines of *Vitis rupestris*. They are as fresh and bright as in midsummer, and I am inclined to think that Professor Munson, of Texas, is on the right track in attempting to evolve from this species and *V. æstivalis* a new race of grapes with iron-clad foliage. My Vines of Woodruff Red, whose foliage appears as wild as the wildest of our Labrusca varieties, present the opposite side of the picture, showing that appearances are often deceptive, and that only by actual trial and experience can we determine the endurance of a Vine's foliage. Next to hardiness of wood, this hardiness of leaf is the most valuable quality in a Vine. *E. Williams.*

Montclair, N. J.

Stove Plants in Flower at Kew.

Solandra grandiflora.—The Solandras and Daturas are closely related to each other; they are also remarkable as being the largest flowered of the plants included in the order Solanaceæ. There is, however, a disparity between the two genera of some horticultural importance, namely, the shy flowering nature of the Solandra as compared with the Datura. But it seems not impossible that, by proper treatment,

the Solandra may be made to bloom every year, and when it does its beauty is of a high order, the flowers being large, trumpet-shaped, not unlike those of *Brugmansia suaveolens*, their color being pale creamy-yellow. There is a fine example of this species now in flower in the succulent house at Kew, and no doubt the dry atmosphere and bright sunshine all summer has had a great deal to do with the free production of the flowers. In moist stoves, although the plant grows very luxuriantly, it cannot be induced to flower. Planted in a bed of poor, sandy soil and trained along the roof-glass, the example in the succulent house makes good growth annually, and this is the third successive year of its flowering there. In winter it gets no water. It is a native of Jamaica, and has been in cultivation since 1781.

Allamanda violacea.—Yellow is the characteristic color of the flowers of all Allamandas except this, in which they are purplish-rose, or what is known amongst milliners as crushed strawberry color. Although an unknown plant in English horticulture now, yet it was in cultivation in England in 1861, when it was flowered and described. It is now in flower at Kew. As an instance of the manner in which plants are distributed and afterwards preserved in some out-of-the-way garden, we may mention the fact that the only garden where, on inquiry, this species was in cultivation was the Botanic Garden of Natal, from whence the Kew plants were obtained. Of course it and all other Allamandas are natives of Brazil. *A. violacea* has the habit and general appearance of *A. cathartica*, but the leaves are covered with scabrous hairs and they are arranged in whorls of four. The flowers are in terminal clusters, and each one is shaped like the flowers of *A. cathartica*, except that the divisions of the calyx are larger.

Aristolochia ridicula.—Amongst a large number of cultivated species of Aristolochia, which are remarkable for the fantastic shapes of their flowers, this is certainly one of the most singular. Mr. N. E. Brown, who is responsible for the specific name, described the flowers as "posltively droll, the two lobes on the sides of the mouth of the flower forcibly reminding one of donkey's ears." The comparison is very unfavorable to the plant, for the flowers are certainly beautiful as well as interesting in form and color; they are about four inches long, curved as in the common Dutchman's pipe (*A. Sipho*), inflated at the base, compressed in the middle, then widening again so as to form a broad, curved neck. The outline of the limb or spreading top is that of a Commodore's hat, the mouth of the tube being ellipsoid and filled with white, converging hairs, the two elongated lobes or ears spread in opposite directions, each being one and a half inches long. There are a few club-shaped hairs near the end of each lobe. The color of the tube is greenish-white with purple veins, that of the limb brown with purple markings. The leaves are kidney-shaped, six inches across, and the stem is thin and quick-growing. The whole plant is pale green and covered with long, somewhat stiff hairs. It grows freely in a stove and produces its flowers from the leaf-axils. It is in flower at Kew. Each flower lasts two days. Other Aristolochias now flowering here are *A. Brasiliensis*, a grand plant for covering large pillars or trellises in stoves; *A. elegans*, one of the very best of stove climbers, as it grows freely and flowers abundantly, whilst the flowers are large, handsome in form and attractive in color; *A. tricaudata*, with dark, shining purple flowers, which are remarkable for their three long, drooping tails, and a form quite as striking as that of the Chimæroid Masdevallias; *A. trilobata*, with elegant, jug-shaped flowers, not unlike the pitchers of a Nepenthes. There are, altogether, a considerable number of Aristolochias with large, ornamental flowers, but they have one unfortunate drawback, namely, that of a disagreeable odor. In this respect *A. Brasiliensis* is probably the worst, whilst *A. elegans* is the least offensive.

Kew. *W. Watson.*

Orchid Notes.

NEARLY half a century ago Mr. James Bateman, in the introduction to his famous work, "The Orchidaceæ of Mexico and Guatemala," wrote: "It is, indeed, probable that Orchidaceous culture will always continue in a comparatively few hands, and it will, therefore, be pursued with the same ardor in the upper walks of life that already, in a humbler sphere, attend the cultivation of the beautiful varieties of the Tulip, Auricula and Carnation." Shortly afterward a writer in the *Gardeners' Chronicle*, in reply thereto, remarked: "I suspect that the time is not far distant when we shall have many of the more-easily cultivated Orchids—*Dendrobium nobile*, for instance, the Cypripediums, etc., etc.—going about in the baskets of the itinerant flower-sellers in London, and as easily grown as *Cactus speciosissimus*." Perhaps the truth lies about midway between these two opinions. We do not remember to have met with any of the numerous vendors of flowers "all a-growin' and a-blowin'" who have included Orchids among their stock in trade, though the last-named writer was, unquestionably, near the truth when he added, "But we must have them for the million."

Orchids for the million we certainly have at the present time, and still their cultivation seems to be extending over a wider field. Most people who have a glass-house of any kind include a few Orchids among their treasures, and, in many cases, with the happiest results. *Cypripedium insigne* is a kind which luxuriates in the temperature of an ordinary greenhouse, and there are many others whose successful cultivation presents no greater difficulties than does a Cineraria or Chinese Primula.

A mania, it is sometimes called by those who profess their inability to understand it and who prophesy its speedy collapse, like the Tulip-mania of a by-gone day. Twenty-five years the late Professor Richenbach gives it, when he orders that his Herbarium shall be sealed up for that period, "in order that the inevitable destruction of the costly collection, resulting from the present craze for Orchids, may be avoided." Let us hope that it is sealed up—beetle-proof, as well as proof against the ravages of bipeds of Orchidomaniacal tendencies—or we fear that its value will be sadly diminished in a quarter of a century.

But it seems highly probable that the present love of Orchids is based on a broader footing than mere vagary of fashion. Perhaps there is no other class of plants which yields a greater return for the trouble expended. The great beauty of their flowers, their grotesque shapes, their wonderful variety and the long period during which many of them remain in perfection are, perhaps, unequalled in any other group; their small size enables a large number to be cultivated in a comparatively limited space; and, so diverse are their periods of flowering, that throughout the entire year some object of attraction is to be found in the Orchid-house. Plants with so many good points are not likely soon to go out of fashion.

The amount of capital now occupied in the importation and cultivation of Orchids is enormous, and when one remembers the vast quantities of certain kinds which are annually torn from their homes and brought over for the decoration of our gardens the question arises, how long will the supply hold out? Certainly, some species seem to be in imminent danger of becoming as extinct as the Dodo. Some time ago we came across the remark of one collector of a certain species that he believed he had secured the last plant. The Messrs. Veitch remark that the old autumn-flowering *Cattleya labiata* is believed to have been exterminated many years ago, no plants having been imported for upwards of forty years, although it has been diligently sought for by English and other horticultural firms. Can nothing be done to prevent such wholesale destruction?

The beautiful *Disa grandiflora*, the "Pride of Table Mountain," as it has been termed, is no longer in such imminent danger of extermination as was the case a few years ago. Large quantities of the tubers were annually exported to Europe, but the summit of the mountain being crown-land the government has seen fit to intervene, and has restricted the removal of tubers within reasonable limits. Perhaps the principle may yet have to be applied elsewhere.

London. *Calypso.*

Odontoglossum Hunnewellianum.—This is a new and handsome species dedicated to H. H. Hunnewell, Esq., of Wellesley, Massachusetts. It was imported in 1888 from near Bogota, Colombia, by Messrs. F. Sander & Co., St. Albans, England, through Mr. Oscar Bobisch. The plants have not yet recovered from the effects of the voyage, and, consequently, only a few flowers have been produced. These are two inches across, but are somewhat larger in the wild specimens seen. The sepals and petals are ovate-oblong, acute, the former being slightly wavy, bright yellow, with a few very large dark brown blotches; the latter are much more wavy on the margins, also bright yellow, and covered with numerous blotches of dark brown. The lip, which reminds one of *O. luteo-purpureum*, is broadly obovate when spread out. It is creamy-white, with crisped denticulate margins, reflexed at the tip and incurved on each side. The surface is covered with brownish blotches, which take the form of small spots at the margins and give the lip a pretty appearance. The crest consists of diverging-toothed keels, with a smaller one between them, while the white truncate limbs of the column are spotted with brown near the slightly crenulate margin. The pseudo-bulbs of this species are two to three inches long,

about one and a half broad, ovoid-compressed, with two edges, and bearing at the summit two narrowly oblong-acute leaves from six to nine inches long. Such is the description of this species as it appears at present, but it remains to be seen what results cultivation will produce.

Odontoglossum Wendlandianum.—This is also a new Odontoglossum, introduced to cultivation for the first time, by the same firm, this year from the mountain ranges of Colombia. It has pyriform compressed pseudo-bulbs two to three inches long, and narrowly oblong-acute deep green leaves about a foot long. As yet only few flowers have been produced, but it is probable that next year the true habit of the plant will be seen to much greater advantage. The individual flowers seen were from two and a half to three inches across, with lanceolate-acute sepals and petals, the former being reflexed at the sides, and the latter very wavy on the margins. The ground color of both sepals and petals is creamy-white, thickly covered with brown and crimson spots and blotches, which give the segments a very handsome appearance. The more or less oblong acuminate lip is somewhat like that of *O. crispum*, but is much more wavy at the sides. It is pure white, with several rich brown blotches below the crest, which consists of two long, elevated and deeply-toothed keels in the centre, with shorter diverging ones on each side. The column is whitish, spotted with purple at the side, and furnished with small incised wings. *John Weathers.*

St. Albans, England.

Seasonable Work in the Flower-Garden.—Little experience is needed to teach that many of the so-called hardy plants are tender enough in some sections to need protection in the border or to justify the care of lifting and placing them in a frame or some other structure, where frost may be partly excluded. Any plants that remain green above ground through the winter, such as the Kniphofias (Tritomas), may be lifted, and the tops cut off to within nine inches of the ground, and heeled-in in a cool cellar. It will be found that *Eulalia Japonica*, and its varieties, are not always hardy, and they may be treated in the same way with perfect success. When the plants are lifted annually, and put out in spring as soon as the soil is warm enough, they make better growth, for the reason, perhaps, that it is possible to thoroughly enrich the soil at planting-time. Montbretias, Crocosmias, Gladioli and Tigridias may now be lifted and the tops cut, not pulled, off, and stored away in dry soil, where frost cannot reach them. We used to lift *Hyacinthus candicans*, but find that, if planted where there is no danger of water accumulating, it is much best to let it winter out.

If it is desired to increase the stock of any of the tall Phloxes, these should be lifted, potted and placed in a cool house, and cuttings made of the young shoots as soon as they are long enough. Young plants are usually far more vigorous than the old ones, as these are liable to become impoverished, and are better replaced by strong young stock. The Salvias that are accredited with being hardy are *S. Greggi*, *S. Pitcheri* and *S. farinacea*. All three are too good to risk out-of-doors, and part of them should, at least, be taken in. We have found them stand well enough during some winters, while in others they die. The same may be said of *Anemone Japonica* and its varieties. These should all be lifted, the tops cut off and the roots laid in, in a cool place, the cooler the better, so long as the frost does not get to them. As these Anemones have a great tendency to start into growth during winter, if it is desired to propagate them, the tendency may be taken advantage of by cutting all the smaller roots into pieces four inches long and laying them in sand in the propagating-bench. These will start at once, and may be potted, and all will make flowering-plants the next season. We have some 200 plants, all beautifully in bloom, from small roots treated in this way last fall. Any bulbs, such as Narcissus, that are yet to be planted, should be got in the ground at once to enable them to get well established before frost, which, fortunately, has been in no hurry to appear this year. *O.*

Passaic, N. J.

Prunus pendula.

OUR illustration upon page 487 represents an old and very large specimen of this tree which has already been described in this journal (vol. 1, p. 196), growing in the garden of Dainichido, a temple garden on the road from Nikko to Chiuzenji, and shows the habit which this interesting tree assumes when it is full grown.

The illustration is from a photograph made by Mr. James M. Codman during his visit to Japan in the summer of last year.

The Forest.

The Forest Pavilion at the Paris Exposition.

LAST week we gave part of a letter originally published in *L'Independence Belge*, describing the beautiful forest pavilion on the Trocadero, which the French Forest Department had erected, and giving an account of some of the forest-material which has been arranged with exquisite art. The department desired, however, to explain to visitors its method of work, and the result of this work, beyond the mere keeping up of the state forests, building roads through them to facilitate excursions and hunting, and making preparations to cut and re-plant for coming generations. The duty of the foresters does not cease here, and millions are annually expended to repair the accumulated ruin caused by deforestation of the hills and mountains by former generations. Forests are re-planted to resist the force of floods and preserve the mountains from being scoured by torrents and swept down upon the plains. The writer adds:

Numerous are the victories already won. Vast tracts of desert have been re-covered with vegetation; villages are springing up again where whole populations had fled before the invading waters and the danger of landslides; mountains and hills once denuded are now covered with verdure; cultivated fields and orchards have replaced the arid and desert plains.

The Administration of Forests, proud of these results, exhibits them in the form of models in relief, maps and pictures. It has gathered a great mass of documents in two halls, comfortably arranged, where easy-chairs invite the visitor to seat himself in front of wide tables strewn with photographs, albums and numerous publications. Here are views of the torrents of Arbonne, and of Secheron, in Savoy; here are photographs of the basin of the torrent of Vaudaine and of the torrent of Riouchanal, with sections of work already completed there. There are curious models in relief of other torrents, besides dioramas, which give faithful and striking representations of some of the magnificent works in progress. At the end of the forest pavilion are three dioramic views, in an excellent light, with well-studied perspective. Near each one is suspended a placard containing, in large letters, the printed explanation of the enterprise, the means employed and the results obtained. The first is a view of the Valley of Péguerre, near Cauterets. There the object was to keep in place a mountain which threatened to crumble and destroy a pretty town. The soil was loosened by the melting snows, and immense blocks, bowling down the rocky slopes, cannonaded the settlement at Rallière or that at Manhourat. To rescue the valley, the rocky sands were sown and planted. Walls of stone, without mortar, were placed at all points where there was no chance of grass growing. The work was begun in 1885, and to-day the problem is solved. In the diorama the workmen are seen clinging to the side of the mountain, digging out the rock, blasting, constructing walls and terraces, sowing and planting on dizzy ledges, to which both men and material are hoisted by ropes and windlasses.

Next comes the picture of the torrent of Bourget, in the Department of the Basses Alpes, which had devastated the valley of the Ubaye for years, but is now under control. 'A series of weirs has been constructed which have raised the bed of the torrent and checked the undermining of the mountain; the violence of the rise of the waters is weakened by diminishing the incline and by successive falls, and the sliding down of the banks has ceased. The diorama shows us these weirs, and the barrier of living basket-work; the forestal guards are there, strengthening the stone work and busy in planting trees to bind the sod. The subjection of the torrent is complete; it is now a gentle mountain stream, bordered by a thousand acres of forest in thriving condition. This work occupied nearly eighteen years.

The third diorama shows the torrent of Riou-Bourdoux, also in the Basses Alpes, noted for its ravages and the most terrible of all the torrents of the French Alps. It destroyed everything in its sudden overflows. Forests, houses, flocks, all had disappeared, swept away by its floods or swallowed up in its deposits of mud, sand and rocks. Not a tree, not a blade of grass, not a living being remained. Barcelonnette, near which it debouches, was endangered. In 1875 the struggle with the torrent began, and now it is vanquished. Here the barrier against floods is a colossal wall of masonry, with hydraulic

mortar buttresses and openings for discharging the water, twenty-eight feet high and 275 feet long; its purpose is to keep back all the solid materials which the torrent carries down and to allow only clear water to pass through. And what a different picture does this region now present! A young forest which has been planted covers the scarred surface with its protecting growth; the soil on the steep slopes is now mantled with grass growing thick and fine; in the valley, once so dangerous, villagers cultivate their lands and Barcelonnette is saved.

This is what is accomplished by restoring the forest and planting trees on a few hundred acres. How many inundations might be prevented, how many annually-recurring disasters averted, if the money and the skill were ready to prosecute more of these effective works.

Near these dioramas are dark chambers, in which the happy idea of picturesque illusions has been carried out. Here is the cabin which serves as a shelter for a gang of twelve workmen; two camp-beds, made of planks covered with straw, blankets and changes of clothing, then tools, shovels, pick-axes, ropes, cans and all the provisions. Here is the interior of a hut for a forestal agent out on a high mountain: An iron bedstead, pine furniture, two chairs, a table and a chest, some shelves on which are placed books, instruments and cooking utensils. Elsewhere we see the forge, set up in a shed made of boughs and ferns, with anvils, bellows, tongs and hammers. All this proves most entertaining to the visitors, and it is instructive as well.

One can imagine that the gigantic trunks from America and Australia consider our modest trees as poor, degenerate species. Beside the Eucalyptus from Victoria and New Zealand, the Mahoganys from Mexico, the Cedars from the Argentine Republic, the big trees of the United States, the Pines from Brazil, the Perobas from the Amazon, and other prodiges from the New World, our Poplars, our Elms, our largest and tallest Pines look like a child's playthings. But our trees, nurtured with so much care and cost, might well retort: "You will not always be giants if those who exhibit you do not heed the lessons taught by the dioramas of Riou-Bourdoux, of Bourget, and of the valley of Péguerre. Let them see what it costs to strip the trees from the mountains without moderation or method; let them ask our foresters what pains and money it costs to repair the recklessness of former generations. The axe and fire and browsing flocks will too soon make your forests as thin and small, and your torrents as destructive as ours."

No doubt our trees are right, and the commissioners from Australia and America would do well to take advantage of their stay on our continent to study the art of cultivating forests and of systematic felling.

Correspondence.

Some Native Vines.

To the Editor of Garden and Forest:

Sir.—Your admirable articles on Masking House Foundations seem to have had in view suburban houses mainly; but the lack of vines about our country homes is noteworthy. One may ride miles without seeing a well-chosen and carefully-trained vine near a farm-house. There are not infrequently piazzas standing bare in the sunshine, which might be made beautiful as well as comfortable places for the household if shaded and fringed by some festooning climbers. This neglect is less excusable since we have so many desirable native vines that can be had for the digging. Perhaps the Virginia Creeper, always thrifty, and with the crowning excellence of rich autumn color, deserves the precedence; but there are many others worthy of kind treatment. The Ground-nut (*Apios tuberosa*), which I lately saw in bloom, is certainly one of these. It is a twining perennial, with light green foliage, which is ornamental throughout the season, though its chief interest lies in the peculiar color of the flowers and their appearance after most of our familiar native climbers are in fruit. The racemes of chocolate-colored blossoms, paler-hued outside, contrast finely with the green leaves, while the inside has a rich velvety appearance and a pleasant odor of Violets. The specimen which I observed had climbed sixteen feet among the branches of a Larch-tree, bearing clusters of bloom at the axil of each leaf for a good part of the distance. The Moonseed is also easily cultivated, and its twining stems and abundant foliage make a most desirable Vine. Even more abundant is the foliage of the unarmed Smilax, which is also ornamented with umbels of black fruit. And why is not the common Virgin's-bower (*Clematis Virginiana*) planted wherever any planting is done? It is the most beautiful of the northern Clematises, and can be found in any wooded region It is never more beautiful than it is along a country road-side but it thrives under cultivation, and makes a wonderful growth in deep rich soil.

Klinger Lake, Mich. *Dorcas E. Collins.*

Rosa setigera and Ipomœa pandurata in Southern Michigan.

To the Editor of Garden and Forest:

Sir.—Mr. B. W. Steere, an intelligent nurseryman, living near Adrian, Lenawee County, in southern Michigan, gives me the following in reference to the Prairie Rose:

"About 1846-47, Barber Perkins made considerable money by shipping the Roses east, where extravagant prices were paid for them. As the excitement ran high, men and boys scoured the woods in all directions from Adrian. They were also found in Monroe County, in the south-eastern part of the state. They were sold as the 'Michigan Rose,' 'Michigan Climbing Rose,' 'Prairie Rose,' and 'Eglantine Rose.'

"They grew mostly on the rich borders of swamps. In going from Adrian by way of Blissfield to Maumee City in a carriage, years ago, in July, I saw them in full bloom, covering small trees to a height of ten to fifteen feet; and their great clusters of flowers were so abundant and beautiful that the sight of them well repaid one for many miles of travel. The last one that I was sure of here, grew on our place near the river Raisin, but was taken up or destroyed seven or eight years ago. The name 'Prairie Rose,' doubtless came from our habit of calling our swamp meadows, 'prairies.'"

There is one vine which I think must be about extinct here in the wild state, Man of the Earth, *Ipomœa pandurata*. The only one I know of runs over a large quince bush, planted forty or forty-five years ago. It still shows its large flowers in July and August, white, with purple throat. It can look at the sun without blinking.

Agricultural College, Mich. *W. J. Beal.*

The St. John's-worts.

To the Editor of Garden and Forest:

Sir.—I was much interested in Mr. Jack's article on "Hypericums," and I wish to endorse his statement that *H. calycinum* is "decidedly the most interesting and satisfactory." In this conclusion every one must concur who is familiar with the beauty of foliage and flower of this species, to say nothing of the immense value of the plant from its hardiness and adaptability for undergrowth and in shaded locations. There are so few really desirable shrubs which succeed under trees and in shady situations, that it is surprising that this fine variety is so little grown or known.

In a trip through England and on the Continent during the past summer, one of the most pleasing and effective things in hardy trees and plants I saw was a solid border of *Hypericum calycinum*, planted on both sides of a walk directly under some double rows of shade. The foliage above was quite thick. Few, if any, sunrays fell directly on the plants at any time during the day. The soil was an ordinary loam, not specially prepared nor over rich. The shade was sufficiently dense to preclude the growth of any shrub or plant not congenial to such conditions, yet the border on both sides, and for the entire length, was a solid mass, about a foot in height, of the most beautiful green, and covered with large, showy, golden-yellow flowers.

Nearly all the Hypericums are largely used for ornamental planting in Europe, but *H. calycinum* is generally considered there—as it will be here in time—not only the most valuable of the species, but for massing in shady situations as almost without a rival or equal in all the long list of dwarf-growing hardy shrubs. *Fred. W. Kelsey.*

New York.

A Pleasing Combination.

To the Editor of Garden and Forest:

Sir.—A lady, and gardening enthusiast, mentioned to me, the other day, a combination which she had used with pleasing effect on her grounds at Wyncote, Pennsylvania—the Trumpet-creeper and Wistaria placed together to help one another rise in life, and drape a gnarled old Cedar-tree.

Possessed of so fine a sense of the beautiful as to have planted the large Dogwood by the hundred upon an extensive lawn as clumps, sections in boundary planting, and notably as a hedge-backing against a row of stately Red Cedars, that forms a protection to one side of her hardy flower-garden, the combination which she emphazies must, in the very nature of things be a happy one.

Rochester, N. Y. *G. H E.*

Notes.

The *Engineering and Mining Journal*, in advocating some action by government to protect the forests against fires, asserts that these fires have this year destroyed more than the value of all the timber planted, the timber stolen and the timber legitimately cut between the Missouri and the Coast Range.

The Dwarf Gray Willow (*Salix tristis*) should make an excellent plant for the slopes of embankments and excavations along railroads, where it will flourish. It rarely exceeds two feet in height, and has slender stems not more than half an inch in diameter. The roots, however, are often as thick as a man's wrist, so that it is a hard plant to dislodge, and it would render good service in holding a bank firm.

The forest-trees in the vicinity of New York are late this year in putting on their autumn colors. Even the Maples are still green, but the Liquidambars are singularly brilliant in chocolate, bronze, maroon and glowing crimson. The Pepperidge, too, is brilliant in cases where the leaves have remained on the trees, but in many instances the leaves of this tree, and of many others, have fallen prematurely, leaving the branches as bare as they are in winter.

In his interesting article in this issue, Mr. Jack states that *Clematis paniculata* can hardly be called a September-blooming plant in Boston. In the vicinity of New York, however, this admirable species was in full bloom from the 1st until the 20th of September. It may be added that *C. crispa* is still showing flowers, even after quite sharp frosts, and the same is true of *C. coccinia*, whose light coral-colored flowers are yet seen in considerable numbers.

We have received from Mr. S. C. Moon, of Morrisville, Pennsylvania, some very large and beautiful chestnuts from a tree said to be a seedling of the European Chestnut. The variety has been named Numbo, by Mr. Moon, on whose farm it originated more than thirty years ago. When boiled, these chestnuts are of good flavor, but the quality of the meat in its natural state is inferior to that of our smaller nuts. The tree is said to be very hardy, symmetrical in outline, and unusually productive.

Worden's Seckel is a new pear which has been in bearing four years. It is a seedling of the Seckel, but is a more vigorous tree and produces its fruit in clusters. The *Country Gentleman* describes the fruit as above medium size, pyriform, smooth, with clear yellow skin and a broad, rich-red cheek. The flesh is white, fine-grained and melting and of a mild and sweet, pleasant flavor. Altogether, it is one of the most beautiful of Pears, and its quality would be rated "very good." It was raised by Mr. S. Worden, of Oswego County, New York, the originator of the excellent Worden Grape.

Syringa oblata in this vicinity has this year sustained its reputation for freedom from mildew. A small plant observed on Saturday last had foliage as fresh and green as in early spring. About Boston, however, many large plants are slightly but distinctly mildewed, and a young plant in the Arnold Arboretum is mildewed as badly as many of the common Lilacs. *S. Japonica* shows no trace of mildew, nor do *S. pubescens* or *S. villosa*. The Chinese and Persian Lilacs are as liable to the fungus as are the varieties of *S. vulgaris*, and, by the way, different varieties standing side by side are very unequally affected.

Agricultural Science for September contains a study of the contents of seed packages obtained from American seedsmen and from Vilmorin-Andrieux et Cie, of Paris. Very little weed-seed was found, and not enough foreign material or imperfect seed to justify the establishment of seed-control stations. The most harmful adulteration of seeds is that of mixing varieties, or of substituting inferior strains or varieties for good ones. But this adulteration cannot be detected by an examination of seeds, and is, therefore, difficult to control. The redress in this case must be demanded of the seedsman by the grower himself after the crop is grown. It is doubtful if the self-asserted irresponsibility of the seedsman, printed upon all seed packets, constitutes any legal immunity from damage in the case of harmful substitutions; at least an English court has decided that such statement does not relieve the dealer. The fact that such instances so rarely come to our courts is proof that adulterations of this character are rare in this country.

The people of the British Islands, as well as the continent of Europe were surprised by a sudden taste of winter on the 16th and 17th of September. Much damage was done to tender vegetation, especially in Belgium, where there are so many large establishments devoted to commercial horticulture. A correspondent of the *Gardeners' Chronicle*, writing from Ghent, says: "About 2 A.M. on Monday, the 16th, frost came on so suddenly and was so severe that every one was taken unawares, and by daylight it was apparent that a serious disaster had befallen the Indian Azaleas, the plants in most places presenting the appearance of having been singed, and for some miles around Ghent the plants have, with scarcely an exception, suffered alike. The disappointment to buyers will be great, and the loss to the growers will prove to be one of the most serious misfortunes which has occurred within the recollection of the oldest horticulturist in Ghent. Packing operations for export were to commence on the very day of the disaster."

The manufacture of shingles in Oregon and Washington from Red Cedar (*Thuya gigantea*) is a rapidly growing business. Formerly these shingles were sold in Colorado and Utah only. Several of the largest manufacturers last year united to form the North Pacific Consolidated Shingle Company, which now sells 20,000,000 shingles a month, finding markets in Missouri, Iowa, Illinois, Indiana, Ohio and New York. These Puget Sound and Columbia River shingles are absolutely free from knots, and they neither curl, warp nor split, and dampness has little perceptible effect on them. Fort Nesqually, built by the Hudson Bay Company in 1841, was covered with split cedar shingles, which are still sound. Roofs laid thirty years ago, and for years covered with moss, have never leaked and appear little the worse for wear. This Cedar is a great favorite with the Indians who hollow their canoes out of the wood because it is so light, splits so true and works so easily. For the same reasons most of the sash and doors in Washington and Oregon are made of this wood. The tree grows to a diameter of twelve to thirteen feet very often, and in a late number of the *Northwestern Lumberman* is an illustration of a tree which is eighteen feet in diameter.

A botanical garden has been established in the Alps of Valais at an elevation of more than 5,600 feet above the level of the sea. It is situated on a cone-shaped knoll, which is about 200 feet high, and composed of a number of natural terraces, planted with *Pinus Cembra* and Larch, and faces north, east and west. On the summit is a plateau facing the south, on which will be a little châlet, containing the library and herbarium of the garden. The Association for the Protection of Plants has bought the land, and converted it into an alpine garden, for plants from all the alpine regions of the globe. Representatives of the floras of the Himalayas, of the American mountains, of New Zealand, of the Antarctic regions, of the Caucasus, of Siberia, of the Pyrenees, the Alps, the Carpathians, and the Ural, will be separated, and each cultivated in a special division. Naturally, M. H. Correvon was named Director of this new trial-garden, in which he had already planted several thousand mountain plants. This garden is at so high an elevation that interesting observations can be made concerning the floras of all the alpine regions of the globe, on the relations of plants with insects, their acclimitization, variability, etc. Already consignments of plants have been sent to M. Correvon, and a German botanist who is traveling in the East, and is continuing the work of Boissier—M. Bornmüller—has promised some interesting specimens. Other parcels are expected from Canada, Greenland and New Zealand. The *Gardeners' Chronicle*, from which we take these facts, invites all who are in suitable latitudes to send to M. Correvon seeds or bulbs from the northern regions in which they are traveling, for the garden of Bourg St. Pierre, which will necessarily serve later on for the temporary reception of plants from high altitudes which cannot be acclimatized directly with us, but require to be subjected to an intermediate temperature first. In this way, M. Correvon is going to try to acclimatize the celebrated but fragile *Calypso borealis*, which he hopes to introduce into cultivation by accustoming it to this intermediate position.

Catalogues Received.

A. M. C. Jongkindt Coninck, Dedemsvaart, near Zwolle, Netherlands; Coniferæ, Rhododendrons, etc.—Dammann & Co., San Giovanni a Teduccio, Naples, Italy; Seeds, etc.—R. Douglas & Sons, Waukegan, Ill.; Forest and Ornamental Trees.—Ellwanger & Barry, Mount Hope Nurseries, Rochester, N. Y.; Fruits, Ornamental Trees, Shrubs, Strawberries, Select Roses, etc.—John Gardiner & Co., 21 N. Thirteenth St., Philadelphia, Pa.; Mushrooms, Spring Bulbs, etc.—Herbert A. Jones, Himrods, N. Y.; Fruit and Ornamental Trees, Plants, Shrubbery, etc.—Jacob W. Manning, Reading, Mass.; Choice Hardy Perennials.—Samuel Wilson, Mechanicsville, Pa.; Seed Wheat, Strawberry Plants, Fruit Trees, Small Fruits, Grape-vines, etc.